

# Teaching in the Middle

## Differentiated Instruction: Setting the Pedagogy Straight

by Rick Wormeli

The most common sentiment among readers of books on differentiated instruction (DI) is that DI is just good teaching. It's whatever conscientious teachers do to increase students' learning over that which otherwise could be achieved by a one-size-fits-all approach. Simultaneously, DI builds learner dexterity and self-advocacy so students can handle anything that is not differentiated for them.

If it's so constructive, why would anyone declare differentiated instruction a corruption of curriculum and instruction, as education author and consultant Mike Schmoker did in his September 29, 2010 *Education Week* article, "When Pedagogic Fads Trump Priorities"? Schmoker's declaration, combined with University of Virginia professor Daniel Willingham's denunciations of learning styles as unsubstantiated by research and hurtful to students' learning, leaves educators in flux: Do we differentiate instruction, assessment, and curriculum, or not?

Although questioning conventional techniques is a hallmark of professional practice and necessary for school vitality, this round of questioning created misinterpretations and misguided responses. More than a year later, confusion lingers, and some teachers have used the suspicions raised by these authors to justify unresponsive teaching practices and to declare students' classroom failures as the fallout from diluted curriculum and over-hyped fads.

### Setting the Record Straight

Let's correct these misrepresentations and put educators' minds at ease: Differentiated instruction is highly effective practice. Students learn more with it than without it. To knowingly omit differentiated instruction from our classroom instruction is a willful act of educational malpractice.

Consider the following examples of differentiated instruction and where you would find fault with the teaching:

- Mrs. Hunt provides three examples of a math algorithm successfully applied because her student, Eric, doesn't understand it after just two.

- Mr. Grebing draws upon his knowledge of Kira's background in baseball to construct an analogy that helps her understand the world of geometric planes.
- Uri is encouraged to use one of three other methods to learn his content vocabulary after experiencing frustration using flash cards alone.
- Nicole demonstrates close to 100% mastery of the unit goals on the pre-test, so Mr. Lounsbury truncates the first few days of learning for her and provides a satellite study that allows her to take the topic much deeper than that planned for the rest of the class.
- After a lecture, six students still don't see the relationships among different elements in the topic, so Mrs. Hollas pulls them to a conference table and helps them create a hierarchal graphic organizer that enables them to see how some elements are subsets of others.
- Matt, an ESL student, is falling behind, and it's due to his lack of familiarity with academic language. Mrs. Nickelsen incorporates additional academic vocabulary-building activities into the unit, highlights key words on task direction sheets, and confirms directions individually with Matt several times a week.

Most of us find little to fault in these scenarios. As ethical teachers, we would never leave students to ignorance or let their immaturity serve as full measure of their potential. Instead, we assess students as they learn, then we respond to the insights generated by that data, and we adjust instruction accordingly. If differentiation seems like common sense, it is.

In the 2010 article, Schmoker writes, "In a series of e-mails, I explained...that there was no research or strong evidence to support its widespread adoption. I asked, with increasing importunity, for any such evidence. Only after multiple requests did I finally receive an answer: There was no solid research or school evidence." He later writes, "We now have evidence that the investment in DI...was never fully warranted. It is on no list, short or long, of the most effective educational actions or interventions."

Differentiated instruction is too large a collection of principles and strategies to serve as a proper, narrowed focus for scholarly research. Asking for the research on DI is similar to asking for the research on good teaching. Where do we begin to answer such a question?

Because more than one strategy at a time is incorporated into most differentiated approaches, we adjust instruction frequently in response to changing students as warranted, and because life throws many unanticipated curveballs into the messy business of learning, it's hard to protect the

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*This article presents just a portion of Rick's response to critics of differentiated instruction. Go online at [www.ample.org](http://www.ample.org) and read Rick's full response.*

integrity of the experimental design and declare correlation or causation when looking at DI's impact.

We can do it over time, of course, and with a great array of observations, but it's hard to draw the conclusion: Was Melanie's lack of performance due to her parents' separation? A new baby brother? Poverty? Bullying? Too few practice sessions? Too many tests on the same day? No visuals during the lesson? No breakfast that day? Something else?

## DI as a Mindset

To get closer to truth when critiquing DI, we need to see research on its components, including tiering for readiness, flexible grouping, scaffolding, adjusting the pace of instruction, using descriptive feedback, providing nutritious breakfasts to those who do not have them, and coming to know our students well so we know what buttons to push so they will learn.

As a frequent reader of Schmoker's other works, I know he sees the instructional value of these elements. Few would doubt their veracity. Here's the thing: These are all elements of differentiation.

As Diane Heacox wisely reminds us, differentiated instruction is a mindset, not a set of recipes to follow. It's responsive teaching: We respond to what we perceive students need in order to learn, and if that differs from child to child, we adjust instruction accordingly rather than leaving them floundering. Is it really acceptable to say to 11-year-old Jeremy, "You didn't learn it the way I taught it, and that's just tough. Get used to it, kid." This is unconscionable.

## Looking at Learning Styles

Schmoker writes, "[D]ifferentiated Instruction...claims that students learn best when...grouped by ability, as well as by their personal interests and 'learning styles'."

Though I part ways with my differentiation colleagues with the word "ability," because "readiness" is more accurate and useful, I agree that these references are found in the DI literature. In the field, however, that last designation is more commonly referred to as "learner profiles," not "learning styles." A learner profile is a set of observations about a student that includes any factor that affects his learning, including family dynamics, transiency rate, physical health, emotional health, comfort with technology, leadership qualities, personal interests, and so much more.

Learning styles can be on this list to the degree that we consider them a justified consideration: Do boys learn differently than girls? Do some students need time to reflect quietly before diving into a task? Does this child need to fiddle with something in his hands in order to keep his attention on the speaker at the front of the room? Does that student need to use a laptop or does he like to record information using paper and pencil?

I agree with Schmoker, Willingham, Hattie, and others that we do not have as much research on learning styles as

we need to make all the claims our profession makes about them, but Schmoker is guilty of creating an inappropriate synecdoche of learning styles, using a small portion of something to indicate the larger whole. Worse, he judges the whole based on the limitations of one of its smaller pieces. This is neither accurate nor helpful.

## Chaos in the Classroom?

Schmoker writes, "I saw frustrated teachers trying to provide materials that matched each student's or group's presumed ability level, interest, preferred 'modality' and learning style. The attempt often devolved into a frantically assembled collection of worksheets, coloring exercises, and specious 'kinesthetic' activities."

He also writes, "With so many groups to teach, instructors found it almost impossible to provide sustained, properly executed lessons for every child or group—and in a single class period. It profoundly impeded the teacher's ability to incorporate those protean, decades-old elements of a good lesson which have a titanic impact on learning, even in mixed-ability classrooms."


If this chaos is happening, it is a corruption of DI. No one is asking teachers to differentiate 24–7. We do it as we can and as warranted, that's it. As the factory models they are today, schools were not meant to teach all students, only the ones who get it first.

DI was developed to mitigate the negative aspects of the curriculum-by-age conveyor belt. We don't have time to teach effectively in a 50-minute period even when we don't differentiate, so we might as well do the best we can when students fail to thrive or need something more advanced.

## To Be Clear...

Differentiated instruction has become prevalent because it works, not because it is an overhyped, shaky theory. Most critics of DI cite the lack of research in learning styles as proof of its misplaced orthodoxy, but that is reckless because it distorts the truth, and educators with little time to analyze the data and conversations are misled. It's similar to pronouncing SmartBoards as an instructional failure because some teachers use them as drying racks for t-shirts after the class tie-dye activity. We see the silliness right away.

Learning styles are neither the definition nor the primary component of differentiated instruction. As with any practice, they can be distorted and misapplied in any school building by any number of educators. Declaring differentiation wrong due to "iffy" evidence on learning styles is ignorance, not epiphany.

I genuinely enjoy Schmoker's writings and many contributions to our profession, but he missed the boat on this one. It's time for him to set the pedagogy straight so our students can get back to learning successfully. 

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The most common sentiment among readers of books on differentiated instruction (DI) is that DI is just good teaching. It's whatever conscientious teachers do to increase students' learning over that which otherwise could be achieved by a one-size-fits-all approach. Simultaneously, DI builds learner dexterity and self-advocacy so students can handle anything that is not differentiated for them.

If it's so constructive, why would anyone declare differentiated instruction a corruption of curriculum and instruction, as education author and consultant Mike Schmoker did in his September 29, 2010 *Education Week* article, "When Pedagogic Fads Trump Priorities"? Schmoker's declaration, combined with University of Virginia professor Daniel Willingham's denunciations of learning styles as unsubstantiated by research and hurtful to students' learning leaves educators in flux: Do we differentiate instruction, assessment, and curriculum, or not?

Not just a gentle ripple across a sleepy mountain pond, the statements of these respected thinkers created white-capped, criss-crossing currents that capsized more than one school's differentiation efforts. Although questioning conventional techniques is a hallmark of professional practice and necessary for school vitality, this round of questioning created misinterpretations and misguided responses. More than a year later, confusion lingers, and some teachers have used the suspicions raised by these authors to justify unresponsive teaching practices and to declare students' classroom failures as the fallout from diluted curriculum and over-hyped fads.

### **Setting the Record Straight**

Let's correct these misrepresentations and put educators' minds at ease: Differentiated instruction is highly effective practice. Students learn more with it than without it. To knowingly omit differentiated instruction from our classroom instruction is a willful act of

educational malpractice. We should worry when a colleague or our own child's teacher expresses pride in not differentiating.

Consider the following examples of differentiation instruction and where you would find fault with the teaching:

- Mrs. Hunt provides three examples of a math algorithm successfully applied because her student, Eric, doesn't understand it after just two.
- Gabriella re-does an assignment after receiving corrective feedback from her teacher.
- Mr. Grebing draws upon his knowledge of Kira's background in baseball to construct an analogy that helps her understand the world of geometric planes.
- Uri is encouraged to use one of three other methods to learn his content vocabulary after experiencing frustration using flash cards alone.
- Nicole demonstrates close to 100% mastery of the unit goals on the pre-test, so Mr. Lounsbury truncates the first few days of learning for her and provides a satellite study instead that allows her to take the topic much deeper than that planned for the rest of the class.
- Because of a learning disability, R.J. uses a sliding aperture made of cardstock, interlocking L's in order to focus his eyes on just one portion of the busy text and not be distracted by the rest of the page.
- After a lecture, six students still don't see the relationships among different elements in the topic, so Mrs. Hollas pulls them to a conference table and helps them create a hierarchal graphic organizer that enables them to see how some elements are subsets of others.
- Gregorio isn't engaged with a topic that normally excites him. Mrs. Silver sits beside him and asks quietly if something is bothering him this day.

- Matt, an English-as-a-Second-Language student, is falling behind, and it's due to his lack of familiarity with academic language. Mrs. Nickelsen incorporates additional academic vocabulary-building activities into the unit, she highlights key words on task direction sheets, and she confirms directions individually with Matt several times a week.

Most of us find little to fault in these scenarios. As ethical teachers, we would never leave students to ignorance, or let their immaturity serve as full measure of their potential. Instead, we assess students as they learn, then we respond to the insights generated by that data, and we adjust instruction accordingly. If differentiation seems like common sense, it is.

So why would Schmoker attack DI? Perhaps it was a reaction to concerned colleagues who expressed distorted interpretations of differentiation, such as an over-reliance on learning styles or multiple intelligence theory as sole differentiation delivery methods. Maybe he didn't have time to do a thorough exploration of differentiated practices and he over-reached in his generalization. Whatever the case, as a result, we're left with confusion in the profession and, for the students of teachers who embraced Schmoker's arguments, frustration.

In the 2010 article, Schmoker writes, "In a series of e-mails, I explained...that there was no research or strong evidence to support its widespread adoption. I asked, with increasing importunity, for any such evidence. Only after multiple requests did I finally receive an answer: There was no solid research or school evidence." He states, "We now have evidence that the investment in DI...was never fully warranted. It is on no list, short or long, of the most effective educational actions or interventions."

Differentiated instruction is too large a collection of principles and strategies to serve as a proper, narrowed focus for scholarly research. Asking for the research on DI is similar to asking for the research on good teaching. Where do we begin to answer such a question?

Because more than one strategy at a time is incorporated into most differentiated approaches, we adjust instruction frequently in response to changing student needs,

and because life throws many unanticipated curveballs into the messy business of learning, it's hard to protect the integrity of the experimental design and declare correlation or causation when looking at DI's impact.

We can do it over time, of course, and with a great array of observations, but it's hard to draw the conclusion: Was Melanie's lack of performance due to her parents' separation? A new baby brother? The teacher's use of manipulatives? Choice of novel? Poverty? Lack of a rich literacy environment at home? Bullying? Too few practice sessions? Too many tests on the same day? Teacher use of a confusing metaphor during the instruction? No visuals during the lesson? No breakfast that day? Illness earlier in the unit? Substitute teacher didn't teach the right lesson earlier that week? Something else?

To get closer to the truth when critiquing DI, we need to see research about its component elements, such as

- Tiering for readiness
- Flexible grouping
- Scaffolding
- Adjusting the pacing of delivery or support so content is more meaningful and easily retained in long-term memory
- Using respectful tasks
- Adjusting the amount of practice for different students according to what is needed
- Rephrasing an example so it makes better sense to a student
- Using descriptive feedback to revise students' skills and knowledge
- Compacting curriculum so advanced students don't stagnate
- Providing nutritious breakfasts to those who do not have them

- Building prior knowledge where this is none so information “sticks” in the mind
- Coming to know our students well so we know what buttons to push so they learn more effectively
- Designing lessons to increase what students capture the first time the topic is taught rather than relying on hours of remediation to fix misconceptions and build missing foundations.

As a frequent reader of Schmoker’s other works, I know he sees the instructional value of these elements. Few would doubt their veracity. Here’s the thing: These are all elements of differentiation.

As Diane Heacox wisely reminds us, differentiated instruction is a mindset, not a set of recipes to follow. It’s responsive teaching: We respond to what we perceive students need in order to learn, and if that differs from child to child, we adjust instruction accordingly, rather than leaving them floundering. Is it really acceptable to say to 11-year-old Jeremy, “You didn’t learn it the way I taught it, and that’s just tough. Get used to it, kid.” This is unconscionable.

### **Looking at the Whole**

Schmoker writes, “[D]ifferentiated Instruction...claims that students learn best when...grouped by ability, as well as by their personal interests and ‘learning styles’.”

Although I part ways with my differentiation colleagues with the word “ability” because “readiness” is more accurate and useful, I agree that these references are found in the DI literature. In the field, however, that last designation is more commonly referred to as, “learner profiles,” not “learning styles.” A learner profile is a set of observations about a student that includes any factor that impacts his learning. Figure 1 is a partial list of what might be included, and included only if the factor affects students learning in a regular classroom:

### **Figure 1: Sample Factors to Include in Learning Profiles**

Family dynamics

Transiency rate

Social-Economic status	Individualized EP
504 Plans	English Language Learner status
Learning disabilities	Gifted/Advanced
Physical health	Emotional health
Speech and Language Issues	Behavior/Discipline concerns
Nationality (if influential)	Diet (if influential)
Religious affiliation (if influential)	Technology access/comfort
Multiple Intelligences	Arts – comfort/proficiency
Personal background/experiences	Leadership qualities
Ethics	Collaborative nature
Personal interests: sports, music, television, movies, books, hobbies, other	Weekly schedule Politics (if influential) Home responsibilities
ADHD	Tourette's Syndrome
Asperger's Syndrome	Down's Syndrome
Hearing or Visual challenges	Auditory Processing issues

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I agree with Schmoker, Willingham, Hattie, and others that we do not have as much research on learning styles as we need in order to make all the claims our profession makes about them, but Schmoker is guilty of creating an inappropriate synecdoche of learning styles, using a small portion of something to indicate the larger whole. Worse, he judges the whole based on the limitations of one of its smaller pieces. This is neither accurate nor helpful.

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If this chaos is happening, it is a corruption of DI. No one is asking teachers to differentiate 24-7. That's physically impossible. We do it as we can and as warranted, and that's it. As the factory models they are today, schools were not meant to teach all students, only the ones who get it first. DI was invented to mitigate the negative aspects of the curriculum-by-age conveyor belt. We don't have time to teach well in a 50-minute period even when we don't differentiate, so we might as well do the best we can when students fail to thrive or need something more advanced. Those "protean, decades-old elements of a good lesson" are well-defined in the differentiation canon.

When we graduate and go into the working world, we have a skill set that matches a job's skill needs. We gravitate (self-differentiate) toward those jobs we're good at doing. We don't have to be good at everything everyone else in the company is good at doing at the exact same time and to the same degree of proficiency.

In school, however, we have to be good at everything everyone else is good at doing, all at the same time and to the same degree of proficiency. No wonder we adjust

things occasionally, or often, for students for whom the regular, one-size-fits-all classroom doesn't work. We teach so students learn whenever and however it occurs, and that may take different paths for different students. We don't just present curriculum and document each child's rise and fall with it.

### **No Room for Fluff**

Schmoker writes, "And [DI] dumbed down instruction: In English, "creative" students made things or drew pictures; "analytical" students got to read and write."

Again, nothing could be farther from the truth. This isn't even close to differentiation ideology. With these comments, Schmoker lets his fiery contrarianism get away from him, relying on the reports of disgruntled others, superficial understanding, and personal observations of a minority of teachers implementing differentiation badly. I want to pull him to one side and tell him, "Dude, do your homework."

Differentiated instruction is far more demanding on students than undifferentiated approaches. It provides the proper challenge at the proper time in the learning, and it always pushes students to transcend current status. There's no room for "foo-foo-fluff" activities such as drawing and coloring a character from a novel when the student is supposed to learn how to analyze literary devices. We don't ask a student to do an oral presentation on Argon when he can't balance chemical equations; we teach him to balance equations. We might change the path he takes to get there, but the ultimate goal is never diluted – he will balance chemical equations.

If watering down is happening in the name of differentiation, blame the teacher trainers for teaching inaccurate ideology and practices, or administrators for letting it happen in their buildings, but don't impugn the whole of differentiation.

Finally, Schmoker lists the three big elements needed to teach students well:

1. "...[C]oherent, content-rich guaranteed curriculum-that is, a curriculum which ensures that the actual intellectual skills and subject matter of a course don't depend on which teacher a student happens to get,"

2. "...[S]tudents read, write, and discuss, in the analytic and argumentative modes, for hundreds of hours per school year, across the curriculum.
3. "...[C]lear, curriculum-based objective and assessment, followed by multiple cycles of instruction, guided practice, checks for understanding (the soul of a good lesson), and ongoing adjustments to instruction."

Differentiated instruction elevates each of these aspects, it doesn't diminish them. The third description, in fact, is one of the biggest tenets of DI. What does Schmoker think, "...cycles of instruction, guided practice, checks for understanding...and ongoing adjustments to instruction" mean? They call for us to be reiterative in students' learning and to differentiate instruction as necessary so all students, not just the easiest ones to teach, learn that content-rich curriculum.

In his March 2009 article for *Phi Delta Kappan*, "What Money Can't Buy," Schmoker calls for teachers to check for understanding repeatedly as well. Why check for understanding? So we can adjust (differentiate) instruction as needed. With these declarations alone, Schmoker nullifies his entire anti-differentiation premise.

Consider the four non-negotiables of differentiated instruction as identified by Carol Ann Tomlinson, one of the original targets of Schmoker's commentary, in her response to Schmoker published in *Ed Week*:

"(1) a learning environment that provides high challenge and support; (2) quality curriculum that emphasizes deep understanding of content and ensures that both teachers and students recognize what is essential for students to know, understand, and do; (3) formative assessment that allows teachers to know where students are relative to essential outcomes; and (4) adapting instruction, using the formative-assessment data, to ensure maximum success of each learner."

'Look familiar? It's exactly what Schmoker is calling for us to do.

Tomlinson continues, "There is obviously no research to support a frantically assembled collection of worksheets and coloring exercises. By contrast, abundant

empirical research and research from neuroscience support the assertion that students learn when work is appropriately challenging for them, and conversely, do not learn when work is consistently too easy or too hard; in other words, student readiness matters. Research also shows that students learn better when they find work personally relevant and engaging; in other words, student interest matters. The third element of the model, learning profile, represents research evidence on how gender, culture, intelligence preference, and learning style may impact learning. While some experts question the concept of learning style, other skilled researchers who have recently studied available data on the topic conclude that the jury is still out on its validity. Many experts caution, as do we, that using instruments lacking in validity and reliability to categorize individuals as having a particular learning style is unwarranted.”

(For a quick reference to some of that research, visit [www.differentiationcentral.com](http://www.differentiationcentral.com))

Readers are invited to read John Hattie's *Visible Learning* (2009) that Schmoker uses to justify his anti-differentiation stance. Hattie synthesizes over 800 meta-analyses of education studies, and many of them point to responsive teaching practices in order to increase students' learning.

### **All about Options**

To his credit, Daniel Willingham, author of *Why Don't Students Like School* (Jossey-Bass, 2009), and one of Schmoker's go-to researchers for proof that differentiation doesn't work, has posted videos declaring that the lack of research on learning styles, not differentiation, is the concern. In fact, he says that we should differentiate according to students' personality, motivation, and interests, and that students are not interchangeable among their classes, adding, “I wouldn't want a child of mine in a class where a teacher didn't at least try to do it.” *[referring to differentiation]*

Willingham and Tomlinson are correct. Most students can learn by hearing, seeing, and doing. It helps in some situations to hear something spoken aloud, to see content laid out in a drawing or photo, or to see the motion of multiple parts working together to perform a function via computer animation, but almost all students can learn

well in each of these ways, and even better if combined. Just because someone enjoys listening to information doesn't mean we teach her how to build an engine by oral descriptions alone. We show her how it works, and we ask her to take apart an engine and put it back together, and then do it multiple times, throwing in a curveball once in a while so she can think flexibly about it.

If we use a baseball scoring analogy with a student learning statistics, he recognizes the clear application of the school topic and remembers the concepts better as a result. That's successful differentiation and good teaching. This does not mean, however, that we must use baseball every time we teach this child, that all baseball players learn best through baseball analogies, or that they cannot learn well through many of the same strategies employed with the rest of the class. It means only that we know our students well, and we successfully use that information to plan lessons to provide what each student needs to be successful.

As Tomlinson wrote in her June 2010 blog on the ASCD Edge Website ([www.ascd.org](http://www.ascd.org)) in response to Daniel Willingham, "The goal should not be to pigeonhole students, but rather to provide options for learning and to help students become increasingly aware of what supports their learning at a given time."

Differentiated instruction has become prevalent because it works, not because it is an overhyped, shaky theory. Most critics of DI cite the lack of research in learning styles as proof of its misplaced orthodoxy, but that is reckless because it distorts the truth, and educators with little time to analyze the data and conversations are misled. It's similar to pronouncing SmartBoards as an instructional failure because some teachers use them as drying racks for t-shirts after the class tie-dye activity. We see the silliness right away.

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